

Revisions to the Application

A substitute specification has been prepared in order to adapt the application to US practice, correct inadvertent informalities, and improve the idiomatic English. The substitute specification (which includes the title and abstract, but not the claims) appears in Attachment A to this Amendment. Attachment A also includes a marked-up copy of the original specification, showing the changes that have been included in the substitute specification.

Among other improvements, the substitute specification condenses the abstract into a single paragraph and provides a new title, as required on page 2 of the Office Action. It also inserts an antecedent basis in the specification for the wrong for translate, such the " narcotic sprayer " to replace the " narcotic guns " in claim 7 and the remote control plane of claim 9 (for the narcotic guns, see page 12 of the substitute specification, line 2, and for the remote control plane, see page 15 of the substitute specification, lines 16-19). Additionally, the substitute specification refers to elements by their reference characters rather than by a combination of the figure number and reference character -- a defect noted on page 3 of the Office Action.

At the bottom of page 2, the Office Action comments that the phrase "flight locus calibrator" is vague and would not be understood by one skilled in the art. It is noted that the term "locus" here is used in a somewhat mathematical sense or "orbit" somewhat astronomg sense, meaning the position of points along a path, and perhaps "flight path " would have been a better translation. In the substitute specification, the flight locus calibrator change from Flight Orbit Calibrator is also called a " flight path specifying unit " as an aid to those who might have occasion to casually review this document (such as patent searchers) in the future. This does not represent new matter since an ordinarily skilled person who had read the application would have recognized that a flight path specifying unit was what the inventor had in mind, particularly in view of the teaching that the "flight locus calibrator" can be used to lock flight course under the remote control of a "ground-based monitoring center" (see the sentence at page 13 of the application as-filed, lines 15-17).

In the paragraph bridging pages 3 and 4, the Office Action inquires why the weight sensor, voice recognition system, and so forth are not provided in the space covered by the double-door. The applicant does not understand, the original specification of the claim 4

shows: "...wherein said 'single person checkroom', which has a preset program and closed space,..." and claim 6 further shows: "...wherein said the identification of a single person in the 'single person checkroom' is confined to the raster curtain.", "...closed space,..." which means that all tests except for password card (Fig. 1e) are conducted in the raster curtain in the closed space of the door, or " provided in the space covered by the double-door.

Near the top of page 4, the Office Action inquires what a "raster curtain" is, and suggests that this is a translation problem. However, it is respectfully submitted that an ordinarily skilled person who had read the application (particularly the passage at page 14 of the application as-filed, lines 3-10 and Figures 3 and 4) would have realized that the raster curtain detector c shown in Figure 4 of the application's drawings cooperates with beams emitted from the launcher k in Figure 4 in order to ascertain whether a person who is being tested has unexpectedly broken beams of the curtain or is carrying something that has broken the beams.

As an aid to those who have occasion to casually review this document in the future, the substitute specification has been revised to assert that the beams emitted by the launcher k are provided "for the raster curtain" (see page 12 of the substitute specification, lines 24-26). It is respectfully submitted that this is not new matter since, as was indicated above, an ordinarily skilled person would have appreciated that the purpose of the raster curtain is to determine whether a person who is undergoing identification testing has reached out of the testing area in an unexpected manner, or is carrying an object that extends out of the testing area. It should be noted that, in Figure 3 of the application's drawings, the beam launcher k is associated with the raster curtain detector c in the block at the upper right-hand corner of the drawing.

Pursuant to 37 CFR §1.125, the undersigned attorney states that he believes that the attached substitute specification contains no new matter, and that an ordinarily skilled person would have realized that the above-noted revisions merely clarify what the inventor had in mind. The Examiner is urged to review the marked-up copy to confirm for himself that new matter has not been added.

At the lines 6 of page 4, the Office Action inquires how does the remote-control plane is prepared to control the airliner?

In this question, it's simple and again abstruse. Just like the remote-control model plane popular among young men about ten or two decades ago, the remote-control plane is a simple and matured flying vehicle remote-control technique but with rather high precision. For example, the ratio of oil injection of the right turbine to the left turbine can be remotely controlled to change the flying direction of the plane rightward or leftward, and angles of the movable spoilers, ailerons, and flaps on the wings can be changed through remote control to decide the flying angle of the plane. Both the oil injection and the angles of the movable spoilers, ailerons, and flaps are controlled through the so-called "magnetic flow valve". In a simplest example of application of the flow valve, it is as simple as a digital gasoline pump at a gas station. A flow feedback record of the flow valve can be used in automatic homing setting procedures.

The present Amendment also revises the claims to adapt them to US practice and to delete unnecessary limitations.

It is respectfully submitted that the claims, in their amended form, are now suitably definite under US practice and thus overcome the rejection under 35 USC 112, paragraph 2.

The present Amendment also includes, in an Attachment C, a request for approval of drawing changes.

The Rejection under the First
Paragraph of 35 USC 112:

The rejection of the claims for lack of enablement is respectfully traversed. Although an ordinarily skilled person who had read the application as-filed might have been taken aback, momentarily, by terms such as "flight locus calculator" and "raster curtain," and might also have wondered why some of the Figures show the detectors and so forth for identity tests beside the "single person checkroom," a thorough study of the application as a whole (including the drawings and the claims) would have dispelled any confusion about these matters. It is not for the ordinarily skilled person that the changes discussed above were included in the substitute specification, but for casual readers (such as future patent searchers) who lack ordinary skill in the art and who will probably appreciate the added clarifications.

But the added clarifications would not have been needed, by an ordinarily skilled person, in order for him or her to make and use the invention without undue experimentation.

Moreover, the disclosure of a patent application only needs to be enabling, under the first paragraph of 35 USC 112, with respect to what is claimed. Since claim 1 is now directed only to the use of a double-door "single person checkroom," the application as-filed is clearly enabling with respect to claim 1.

Information Disclosure Statement:

At the top of page 3, the Office Action comments that a listing of references in the specification does not constitute a proper Information Disclosure Statement. However, a proper Information Disclosure Statement, with a form 1449 and copies of the references, was filed on March 5, 2002. If it has been inadvertently misplaced, it is respectfully requested that the undersigned attorney be telephoned, at the number listed below, so that an extra copy can be forwarded to the Examiner.

The Rejection for Obviousness:

The Office Action rejects claim 1 (*inter alia*) for obviousness on the basis of Garehime in view of Zekich, Feher, and Borthayre. The Office Action acknowledges that Garehime lacks a double-door system with means to determine the accessibility of a person to the cockpit, but notes that Zekich discloses a double door system. Zekich's system is used for a security area, but not specifically on an airplane. More importantly, Zekich's system uses revolving doors. While it is true that, at one position of a revolving door, a person would be confined between two segments of the door, it is likewise true that the weight and space required for a revolving door would clearly be an appropriate for use on an airliner. Furthermore, there is nothing in Zekich's use of revolving doors that would have suggested,

to an ordinarily skilled person, the use of a double-door "single person checkroom" which includes (in the words of claim 1) "...first and second doors that are to be connected open and closed positions of one another." and (in the words of claim 2) " ...the first and second doors are opened and closed according to the preset program." , and Fig.3 shows the double-door of the On/Off program. (page 12 c-e of the substitute specification,) But, the segments of a revolving door, in contrast, move in unison of a mini cycle.

The Office Action comments that Borthayre discloses means for monitoring an airliner from the ground and that Feher discloses a system to take control away from the cockpit. Neither of these references, though, supply what is lacking in Garehime, or suggest the use of first and second to be connected movable doors in order to form a "single person checkroom" on the way to the cockpit of an airliner.

Since the remaining claims band from claim 1a and recite additional limitations to further defined the invention, it is respectfully submitted that they are patentable along with claim 1 and need not be further discussed.

The inventor also responds to the examiner's rejections to the claims as follows:

A. About the rejection to claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over Garehime in view of Zekick, Feher, and Borthayre:

1. Garehime (US Pat. No. 4,644,854) discloses a bullet-firing weapon having an electronic image sensor incorporated therewith, while the present invention discloses a narcotic gun that is actually an ejector. A bullet-firing weapon is not legally allowed for installing on a passenger plane. The American government has not yet legislated to permit installation of security means, such as bullet-firing weapons, on passenger planes, at least at the time the patent application for the

invention of Zhen-Man Lin is filed. In view that the "monitoring device" is not a patented invention made by Garehime, it is not appropriate to reject the patentability of Zhen-Man Lin's invention based on the Garehime's invention and teaches of Zekich and Feher.

2. Zekich (US Pat. No. 4,586,441) discloses a revolving door system installed with bulletproof glass, while Zhen-Man Lin discloses a "unidirectionally" transparent bulletproof glass door that allows only the pilot to see the passage from one direction of the door and makes the hijackers conscious of someone is looking at them. This is an important military concept and has increased deterrent force against the hijackers.

Moreover, the system taught by Zekich lacks the detector of human body infrared and the detector of image test.

The "hand geometry reader" disclosed in Zekich's invention is exactly the hand geometry reading and measuring means disclosed in US Pat. No. 3,648,240 granted to Jacoby et al. On the other hand, the "five-finger mold test" disclosed in Zhen-Man Lin's invention employs image scan technique to supply data to a computer for splitting and comparing through computerized procedures. Lin's "five-finger mold test" is completely different from Zekich's hand geometry reader in terms of checking manner, and the two measures are products of different times.

In the double-door system disclosed by Zhen-Man Lin, all the tests are conducted within the zone defined by the raster curtain. Without doing so, all the tests are subject to errors and fail to successfully deal with a terrorist like Ben la den. The double-door system taught by Lin is an absolutely important and novel invention.

Moreover, a double-door and a revolving door are different in terms of their physical spatial dimensions. It is obvious the double-door is more suitable for use on a passenger plane due to its reduced volume as compared with the revolving door. An important nature of patent in the scope of intellectual properties involves the novelty and originality of an invention. It is improper to deny the originality of an invention (Lin's double-door) just because the existence of another early structure (the revolving door).

3. Feher (US Pat. No. 4,816,828) discloses an aircraft damage assessment and surveillance system. If the electronic image sensor disclosed in Garehime's patented invention (US Pat. No. 4,644,845) could completely replace Feher's invention, why is Feher's granted a patent two years later after Garehime has obtained the patent?

Feher discloses a surveillance system that is not designed to prevent a hijack, while Zhen-Man Lin discloses a systematic solution program for preventing airliner hijack. In Lin's airliner hijacking prevention system, narcotic ejector guns

are installed above the cross-shaped passages of the four entrances of the plane (see number "3" in Fig. 1) and could be actuated from either the ground monitoring center or the cockpit.

The zones on the plane available by the hijackers are therefore largely restricted. The surveillance system disclosed by Feher does not include an independent and concealed power supply system and tends to be shut down by the hijackers and becomes completely useless.

On the other hand, Lin's invention emphasizes the use of an independent and concealed power supply system for monitoring and communication systems on the plane. Feher does not suggest the use of satellite relay stations and standby remote-control plane in his surveillance system, while Lin does.

In brief, Feher's surveillance system and Lin's airliner hijacking prevention system are completely different in the fields to which they are to be applied. It is obvious Feher's invention can not replace Lin's invention at all in terms of their application fields.

4. Zhen-Man Lin's invention is actually an improvement on Borthayre's design (FR Pat. No. 2584842). The expression of "on the crew or the passengers which, by virtue of their combination and their interrelations" in the Abstract of Borthayre's invention clearly verifies the system taught by Borthayre includes automatic homing device that can be actuated only through the cooperation of the crew and the passengers. It is obviously questionable by whom the automatic homing device is actuated in the event the crews are under control of the hijackers and the passengers are not trained at all. And, what if the pilot(s) should be a terrorist? Lin's invention obviously solves this problem by having the power of remote-controlled homing or steering to be controlled by the ground monitoring center.

In Borthayre's invention, there is not provided the independent and concealed power supply system. The ordinary power supply systems on the plane tends to be shut down by the hijackers and become completely useless. However, Lin's invention emphasizes the use of an independent and concealed power supply system for monitoring and communication systems on the plane.

Borthayre's invention does not disclose the use of satellite relay stations and standby remote-control plane in his monitoring system. What if the plane in trouble should be a location far away from the ground control center, or what if the signal of homing should be affected by geographical or weather conditions? For the sake of the crews' safety, Lin's invention has stressed the solution in this aspect.

Borthayre's invention does not include the flight trajectory (or orbit) calibrator disclosed in Lin's invention. The flight trajectory calibrator disclosed in Lin's invention enables a real-time report to the ground monitoring center about any tendency of the plane to deviate the normal flight course.

B. About the rejection to claims 9 under 35 U.S.C. 103(a) as being unpatentable over Garehime as modified by Zekick, Feher, and Borthayre as applied to claim 1 above, and further in view of Torian et al.:

Torian et al. (US Pat. No. 3,856,237) discloses a radar guidance system for vehicles. This system is indeed a necessary means for the remote control of a passenger plane 28 years ago when the satellite locating technique has not been widely employed, and it is still a necessary search and guidance radar system in existing ground monitoring centers. The radar guidance system disclosed by Torian et al. is a standard facility for the satellite relay and locating systems and the existing ground monitoring centers. Although the radar guidance system disclosed by Torian et al. equipped at the ground monitoring centers supports both the autopilot and the remote-controlled pilot of a hijacked plane, it does not necessarily mean Torian et al has the right to share or take exclusive possession of the patent right for automatic homing and/or remote-controlled homing. Therefore, it is not appropriate for the examiner to request that Lin's invention also technically covers claims for the radar guidance system or even the satellite relay and locating system.

Just as the bullet-firing weapon disclosed by Garehime that is not permitted for installing and use on a passenger plane, the inventions of Torian et al and of Zhen-Man Lin actually belong to two different fields. It is unreasonable to reject Lin's invention in view of Torian et al.

Nevertheless, it is doubtless the radar guidance system disclosed by Torian et al is an indispensable means for supporting and assisting independent remote control of flight, particularly when pilotless planes are needed by the United States in attacking Afghan, in which the planes are not remotely controlled to fly within fixed flight courses.

For most navigation courses for civilian aircrafts, there are provided not only complete ground and airfield locating systems, but also satellite locating systems. Meanwhile, there are receivers on the plane ready for displaying at any time the current altitude, longitude, and latitude of the plane. In consideration of these true conditions, the examiner would not say "as taught by Torian et al to remote control the aircraft."

The automatic homing technique for civilian aircrafts is extremely simple and matured. Once a civilian aircraft has been successfully located when it is approaching to the airport, it can be set to the automatic landing procedures. Key points of automatic landing procedures include calculation of the plane's flying altitude, flight speed, and a distance between the plane and the airport, the influence of ambient wind speed, etc. A device referred to as the electromagnetic oil flow control valve is directed to control the oil injection of the jet engines at two sides of the plane to decide the leftward and rightward flight direction and flight speed. Another device also referred to as the electromagnetic oil flow control valve is directed to change the positions of oil-pressure rods on two wings of the plane, in order to change the floatability of wings against air to match with the landing procedures. Since the full set of automatic landing procedures has long been stored on the plane and is ready for use at any time, the remote-controlled homing referred in Lin's invention has already been largely simplified, so that the plane is not remotely controlled all the way but is remotely controlled only to the time when it

reaches at a homing procedure spot set on the flight path. Thereafter, the plane is set to automatic homing or automatic landing procedures. Therefore, it is not necessary to be taught by Torian et al. However, even if it were necessary to use the system taught by Torian et al, the patentability of Lin's invention is not in any way affected by the patent right granted to Torian et al., because the two inventions belong to two different application fields.

One important thing is the existence of the fact that the electronic image sensor disclosed by Garehime does not hinder the imaging apparatus disclosed by Feher for use on the plane is obviously because there are precedents of co-existing rights in different fields. The inventor sincerely hopes the examiner could get rid of the idea that the 28-year old invention by Torian et al has influence on the patentability of Lin's invention.

C. The inventor about the Ord, Anderson, Pizzo, and Jensen disclose hijacking prevention means. (see the Office Action inquire pages 7, lines 3)

1. **Ord.** (US Pat. No. 3,704,845) responded page 6 of the application as-filed.
2. **Anderson,** (US Pat. No. 3658277) the invention of Anderson is a mechanical rotating space allowing only one person, which was designed 30 years ago, without the conception of a separate buffer space. The invention of Anderson cannot prevent hijackers from entering the cabin together with crew because it does not fix any automatic check device in the rotating space.
3. **Pizzo.** (US Pat. No. 3,811,643) a separate space is set at the back of the cabin, and a trap is installed catch the hijackers.

This patent is 28 years old. The above independent space and trap is not controlled automatically. It is not important to catch the hijackers alive and it is against the law to let free the hijackers without permission. Only a single foolish hijacker can be caught alive!

The request of Pizzo is totally different from that of Zhen-Man Lin, and thus has nothing to be drawn upon. It is unfair to say that the patent of Zhen-Man Lin has drawn upon the insights of Pizzo. Therefore, Patent 3,811,643 will not affect the acknowledgement of Lin's patent.

4. **Jensen** (US Pat. No. 3,841,328) the "Airplane Hijacking Injector" is totally different from Lin's patent. The injector hides under the seat. That is impracticable. The hijackers generally stand in their action. If the hijackers force the crew to manipulate the remote controller, the passengers will actually (although unwillingly) help the hijackers!

The anesthetic in Lin's patent is sprayed out, while that in patent 3,841,328 is injected. Therefore, Lin's patent is not affected by the latter.

In patent us-3,841,328 of Jensen, the seat is used dynamically and

irregularly. It is unpredictable when the **injector will lose control and inject toward** passengers. It is unknown whether the airlines are willing to take the risk to use it and whether the hijackers are willing to sit on the seat. It is unlikely that the huge system of Lin's patent draws upon the patent of Jensen.

D. The inventor about the Jacoby et al, Diaz, Anastassakis, and Brown disclose security systems. (see the Office Action inquire pages 7, lines 4)

1. **Jacoby et al, (US Pat. No. 3,648,240)** The patent measures the dimensions of a human hand and compares them with previous ones. It is superior to the advanced optoelectronic coupling measurement of distance 30 years ago. It is wide different from the finger and palm print obtained in the patent of Zhen-Man Lin by using picture scanning and comparing and checking it through computer program. It is the difference of a whole generation in terms of both accuracy and workmanship. A huge and complete system allows a separate patent, but pitifully, the patent of Zhen-Man Lin does not draw upon the patent of us- 3,648,240, therefore, Dear Examiner should not consider it.
2. **Diaz, (US Pat. No. 6,308,644)** the invention is a 4-door "2-room space" with limited check means, totally different from the invention of Zhen-Man Lin both in terms of uses and in terms of check means. Therefore, Lin's invention will not be affected.
3. **Anastassakis,(US Pat. No.3,750,158)** patent, takes weight as the parameter to compare the difference resulting from the preset value. If the difference exceeds the predetermined range, an alarm will occur or another region will be controlled. The patent mainly involves "the comparative unit of digital weight", which is "IC" component available everywhere. Does that mean that we can use the patent of 3,750,158 if the unit is available?

Therefore, the patent of 3,750,158 does not affect the patent of Zhen-Man Lin, which uses digitized weight as another check means. The key of Zhen-Man Lin's patent is "system", and it is allowed to involve related patent in a huge anti-hijacking system.

4. **Brown, (US Pat. No. 3,697,972)** The metal detection alarm system does not relate to Zhen-man Lin's application for patent, because passengers must pass the check of the security system of the airport before going on board. The metal detection alarm system is the standard configuration of the security system of the airport, therefore no defense is necessary for that system.

The following is a summary of the originated hijacking-preventing system invented by Zhen-Man Lin:

1. Special beams of raster curtain for test;
2. Narcotic ejector gun;

3. Infrared image test;
4. Image test;
5. Voice recognition; and
6. Flight trajectory (or orbit) calibrator.

And, the following is a summary of the improvements made by Zhen-Man Lin on hijacking-prevention systems:

1. "Unidirectional" bullet-proof glass door;
2. Independent and concealed electronic monitoring device and power supply system thereof;
3. Five-finger mold hand image reader test; and
4. Remote-controlled automatic/semiautomatic steering.

Conclusion

For the foregoing reasons, it is respectfully submitted that the application is now in condition for allowance. Reconsideration of the application is therefore respectfully requested.

Respectfully submitted,



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Date

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ATTACHMENT B -- CLAIM CHANGES

This attachment includes claims that are being rewritten in the present amendment, with brackets being used to identify deletions from the previous version of the rewritten claims and with underlining being used to identify additions to the previous version.

1. (Amended) [Airliner] An airliner hijacking prevention system solution program consists of the following:
 - a. [The] A double-door “single person checkroom” is that provides the [only] single entrance to the cockpit ;
 - b. The cockpit and the ground monitoring center continuously monitor the cabin through the concealed electronic monitoring devices, forming a deterrent to potential hijackers;
 - c. With the flight locus monitor, the ground-based monitoring center may switch manual steering over to remote-controlled automatic/ semiautomatic steering when the engineer on the airliner loses his right to act.
2. (Amended) [Airliner] An airliner hijacking prevention system [solution program] as claimed in claim 1, wherein said “Single person checkroom” is the only entrance to the cockpit, and the [two] first and second doors are opened and closed according to the preset program .
3. (Amended) [Airliner] An airliner hijacking prevention system [solution program] as claimed in claim 1, wherein said the double door, that is, the [front] first and [back] second doors of the “single person checkroom” are equipped with unidirectionally transparent bulletproof glass, shockproof plastic, or a naked eye viewing window.
4. (Amended) [Airliner] An airliner hijacking prevention system [solution program] as claimed in claim 1, wherein said “single person checkroom”, which with preset program and closed space, one or more identification means such as weight, image, voice, fingerprint or ID number can be used to the determine of right of passage.

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5. (Amended) [Airliner] An airliner hijacking prevention system [solution program] as claimed in claim 4, wherein [said] the detector means for fingerprint identification [mean, that is,] comprises a “five finger mold ”[,] which helps the “single person checkroom” make identification [almost unmistakably].
6. (Amended) [Airliner] An airliner hijacking prevention system [solution program] as claimed in claim 4, [wherein said the identification of a single person in the “single person checkroom” is confined to the] further comprising means for generating can to set the different frequency’s beams of a raster curtain around the person in the “single person checkroom,” and detector means for detecting whether the raster curtain has been breached .
7. (Amended) [ejector Airliner] An airliner hijacking prevention system [solution program] as claimed in claim 1, wherein said the “electronic monitoring device” can be connected to the narcotic sprayer [guns] installed at the cross-shaped passages of the four entrances of the plane.
8. (Amended) [Airliner] An airliner hijacking prevention system [solution program] as claimed in claim 1, wherein [said the system transfers] the airliner additionally has a cabin, wherein messages between the airliner and the ground-based monitoring center are transferred through a relay satellite or special frequency band, and [continuously monitors the cabin through the] further comprising a concealed electronic monitoring device for permitting the ground-based monitoring center to monitor the cabin and passenger cabin.
9. (Amended) [Airliner] An airliner hijacking prevention system [solution program] as claimed in claim 1, [wherein a] further comprising a remote-control plane [is prepared] for use when [said] the ground-based monitoring center [could not] is unable to control the airliner normally due to poor [coverage of communication signal, said] communications, in which case the remote-control plane takes off and controls [said] the airliner.